

Claim Amendments

1. (currently amended) A separable electrical connector for separably, electrically interconnecting the conductors of one multi-conductor cable to the conductors of a second multi-conductor cable, comprising:

two multi-conductor cables, each cable having a plurality of partially-exposed conductors;

a layer of anisotropic conductive elastomer (ACE) in electrical contact with the conductors of both of the cables; and

means for compressing the ACE, to provide electrical signal paths between the conductors of the cables through the ACE.

2. (original) The electrical connector of claim 1 in which at least one cable is a ribbon cable.

3. (currently amended) The electrical connector of claim 2, further comprising a paddle board having conductors that are directly connected to the conductors of the ribbon cable, with the ACE layer against the conductors of paddle board.

4. (original) The electrical connector of claim 3 in which both cables are ribbon cables.

5. (currently amended) The electrical connector of claim 4, further comprising a paddle board having conductors that are directly connected to the conductors of each of the ribbon cables, with the ACE layer against the conductors of both paddle boards.

6. (original) The electrical connector of claim 1 in which at least one cable is a flex cable.

7. (original) The electrical connector of claim 7 in which both cables are flex cables.

8. (currently amended) The electrical connector of claim 7 in which the conductors of both flex cables are on the surfaces of the cables, and terminate in conductive pads that face one another in the connector, the ACE lying directly against the pads of both cables.

9. (original) The electrical connector of claim 1 in which both cables are multi-axial cables each comprising at least two spaced coaxial conductors.

10. (original) The electrical connector of claim 9 in which the ACE lies directly against the conductors of both cables.

11. (currently amended) The electrical connector of claim 9 further comprising printed circuit boards with conductors directly connected to the conductors of each of the cables, with the ACE layer against the conductors of both boards.

12. (original) The electrical connector of claim 10 in which the means for compressing the ACE comprises mounting sleeves coupled to both cables.

13. (original) The electrical connector of claim 12 in which the means for compressing further comprises a clamp assembly coupled to the mounting sleeves.

14. (original) The electrical connector of claim 12 in which the mounting sleeves are made by potting the ends of the cables in a settable medium.

15. (currently amended) A separable electrical connector for separably, electrically interconnecting the conductors of a ribbon cable to the conductors of a second electrical device, comprising:

a multi-conductor ribbon cable having a plurality of partially-exposed conductors;

a second electrical device having a plurality of exposed conductors;

a layer of anisotropic conductive elastomer (ACE) in electrical contact with the exposed conductors of both the cable and the second electrical device; and

means for compressing the ACE, to provide electrical signal paths between the conductors of the cable and the conductors of the second electrical device through the ACE.

16. (original) The electrical connector of claim 15 in which the second electrical device is a printed circuit board (PCB).

17. (original) The electrical connector of claim 16 in which the second electrical device is a second ribbon cable.

18. (currently amended) A separable electrical connector for separably, electrically interconnecting the conductors of a flex cable to the conductors of a second electrical device, comprising:

a flex cable having a plurality of exposed conductors;

a second electrical device having a plurality of exposed conductors;

a layer of anisotropic conductive elastomer (ACE) in electrical contact with the conductors of both the cable and the second electrical device; and

means for compressing the ACE, to provide electrical signal paths between the conductors of the cable and the conductors of the second electrical device through the ACE.

19. (original) The electrical connector of claim 18 in which the second electrical device is a printed circuit board (PCB).

20. (original) The electrical connector of claim 18 in which the second electrical device is a ribbon cable.